Space Solar Power Concept Technology Maturation
Technical Interchange Meeting
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Output from Working Group Session: Wireless Power Transmission

Output from Working Group Session: XXXXXXXX

- The past few years have seen technology development and new technologies emerge which could have an impact on reaching the goals of SSP.
- List the technologies which may have the possibility to achieve the goals of SSP. These technologies must have **revolutionary** potential and address one or more of the following characteristics:
  - Significant mass reduction
  - Dramatically improve efficiency
  - Considerable cost reduction
  - Reliability and longevity improvements
  - Ability to withstand operating environments

WPT working group attendees

- Neville Marzwell
- Frank Little
- Mark Skinner
- Paul Werbos
- Rick Luce
- Connie Carrington
- John Fikes
- Dimitris Pavlidis
- Bryan Erb
- Mark Henley
- Richard Fork

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Table 1

List of Revolutionary Technologies:
1)Solar Pumped Laser
2)Free-space combined microwave oscillator
3)

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Table 2

Detailed description and assessment of technologies from Table 1. List the impact to the SSP goals and the other related technologies:

1) Solar Pumped Laser:

laser propulsion

high efficiency laser power transmission

2) Free-space combined microwave

elimination of pmad

3)

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Table 3

Consensus on the future direction of research and development to solve the challenges of SSP:

Near Term:

Microwave - Retrodirective beam steering

- phase lock multiple amplifiers

Laser - Solar pumped CW ground demonstration to test feasibility of space structure, materials, lasing level, thermal management

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Table 3 continued

Far Term:

Microwave - integrate microwave oscillator and PV element

Enhanced coupling between phase locking the string of fiber/disc lasers